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LOCKHEED AIRCRAFT CORP.		ENGINEERING STUDY <input type="checkbox"/>		LAC-186						
		CHANGE PROPOSAL <input checked="" type="checkbox"/>								
DATE JUNE 24, 1964		AFFECTS: WSPO <input checked="" type="checkbox"/>		PROJECT <input checked="" type="checkbox"/>						
NAME OF MAJOR COMPONENT		PART OR LOWEST SUBASSEMBLY		PART NO. & MODEL OR TYPE						
TITLE OF PROPOSAL: Install New Automatic Flight Control & Attitude Heading Reference System										
NATURE OF PROPOSAL: SEE PAGE 2										
REASON FOR PROPOSAL: SEE PAGE 1										
ES	ESTIMATED COST AND TIME INVOLVED: ADDITIONAL FUNDING REQUIRED:									
CP	ESTIMATED COST FOR KITS OR PARTS: SEE PAGE 6 & 7 ADDITIONAL FUNDING REQUIRED: SEE PAGE 6 & 7									
ITEMS AFFECTED BY PROPOSAL:										
SAFETY <input type="checkbox"/>	MISSION EFFEC- TIVENESS <input checked="" type="checkbox"/>	PERFORM- ANCE <input checked="" type="checkbox"/>	OPERATING PROCEDURE <input checked="" type="checkbox"/>	INTER- CHANGE- ABILITY <input checked="" type="checkbox"/>	WEIGHT OR WEIGHT & BALANCE <input checked="" type="checkbox"/>	TOOLS & SUPPORT EQUIPMENT <input checked="" type="checkbox"/>	MAINTE- NANCE PROCEDURE <input checked="" type="checkbox"/>	SERVICE LIFE <input type="checkbox"/>	FLIGHT MANUAL <input checked="" type="checkbox"/>	MAINT E- NANCE MANUAL <input checked="" type="checkbox"/>
EST. MAN/HRS. REQ'D. TO ACCOMPLISH CHANGE IN FIELD										
SOURCE OF PARTS FOR KIT LAC & GFE				AVAILABILITY _____ WEEKS AFTER APPROVAL SEE PAGE 8						
DISPOSITION OF SPARES AFFECTED SEE PAGE 5										
INITIATED BY:		APPROVED: WSP PRO								
PROJECT - WSPO		Approved For Release 2002/08/21 : CIA-RDP89B00980R000200170030-2 8-1-64 3 Aug 64								

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NATURE OF PROPOSAL:

- A. Install ISI Automatic Flight Control System (AFCS) and Attitude Heading Reference System (AHRS) components as listed below:

COMPONENT TITLE

COMPONENT P/N

NOSE SECTION:

AFCS Computer	11CE019A
Trim Coupler	1L78C
Rate Gyro Package	121296-01
(3 Each 2157-30AK-1 or	
3 Each 2152-30V-1 Rate Gyro*	
are included)	
Mach Control*	1L20H-01
Two Gyro Platform	2171AB
AHRS Amplifier & Power Supply	3311H
AHRS Adapter	6502F
AHRS Power Converter	1601F
Control Relays	
Support Bracketry	

COCKPIT SECTION:

AFCS Controller	11CC108A
AFCS Gain Pots (3 Each)	
AFCS Auto Trim c/o Switch & Light	
AFCS Auto Trim Test Switch	
AFCS Pitch Trim Indicator*	707502-03 Series Q118-5
AFCS Roll Trim Indicator*	707502-01 Series Q118-4
AHRS Controller	3804G
Circuit Breakers (2 Each)	
AHRS Power Control Switch	Micro 6ET1-T
Bearing Distance Heading Indicator	248745 Model 1163 Type 8L
Circuit Components Required for new Inverter	(WSPO ONLY)
Control	
Support Bracketry	

*See Footnote on Page 3

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NATURE OF PROPOSAL: (Cont'd)

<u>COMPONENT TITLE</u>	<u>COMPONENT P/N</u>
<u>Q-BAY SECTION:</u>	
AHRS Rate Switch Gyro*	2159C-01
750 VA Inverter (WSPO ONLY)	MGH182-100
Various Circuit Hardware Required for Inverter Circuit (WSPO ONLY)	
Support Bracketry	
 <u>FUSELAGE AFT OF Q-BAY AND OVER FRONT WHEEL WELL</u>	
Pitch Servo	56004-000
Yaw Servo	56004-000
Pitch Capstan*	913B-4-01
Yaw Capstan*	913B-4-01
 <u>FRONT WHEEL WELL:</u>	
Roll Servo	56004-000
Roll Capstan*	913B-4-01
 <u>AFT TAIL SECTION:</u>	
Pitch Followup	4000A
Yaw Followup	4000A
Support Bracketry & Linkage	
 <u>RIGHT WING:</u>	
Roll Followup	4000A
Support Bracketry & Linkage	

*This part will be removed from the aircraft, overhauled and/or modified as required to return the component to a "like new" condition. After overhaul or modification, the part shall have a "-01" affixed to the existing part number. The trim indicators will be identified with a "-4" and "-9" in lieu of the "-01" number.

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NATURE OF PROPOSAL: (Cont'd)

LEFT WING

Roll Followup
Flux Valve*
Support Bracketry
Followup Linkage

4000A
664543-01 Type C2

VARIOUS CIRCUIT COMPONENTS

Connectors (64)
Relays (9)
Switches (4)
Potentiometers (3)
Circuit Breakers (8)

B. WIRING TO BE INSTALLED.

- a. Nose Section complete.
- b. Cockpit complete (in conjunction with Cockpit - Update IAC ECP 164).
- c. Servo wiring to fuselage over, and in wheel well.
- d. Followup wiring to each wing and to tail section.
- e. Flux Valve wiring from Left Wing disconnect to Nose Section.
- f. Q-Bay wiring for Inverter Installation (WSPO ONLY).

REASON FOR PROPOSAL:

To provide an Automatic Flight Control System and Attitude Heading Reference System that:

- a. is designed and manufactured in accordance with current state of the art practice.
- b. has performance characteristics compatible with the required aircraft mission profile.
- c. provides increased system and component reliability.

*See Footnote on Page 3

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DISPOSITION OF SPARES AFFECTED:

After all Articles have been modified the following Components will have no further requirement on this aircraft. A suitable quantity of Spare Components should be maintained until all aircraft have been turned around.

<u>COMPONENT TITLE</u>		<u>PART NUMBER</u>
Controller		996H
Servo (3 Each)		118BFX or 118BF
Followup		911A-1
Followup (3 Each)		11450D-1
Mach Amplifier		119611-01-01
Trim Control		113459-02
Elapsed Time Indicator		Type MH-1
A/P Control Gyro	(PROJECT)	114705-02R345-2 or
	(WSPO)	114705-02R338-2
500 VA Inverter (WSPO ONLY)		R119-2
Compass Gyro & Amplifier		2156A & 3303A
Control Panel		3801A
Transformer		1611A
Indicator		ID250A/ARN

VARIOUS CIRCUIT COMPONENTS

Resistors (6)
Capacitors (5)
Filters (3)
Connectors (64)
Relays (12)
Switches (7)
Potentiometers (8)
Circuit Breakers (7)

WEIGHT & BALANCE:

There is no increase in weight. However, the equipment is now installed in the nose of the aircraft and moves the C.G. FORWARD. To maintain a zero C.G. shift (ten) 10 additional pounds of ballast must be installed at F. S. 673.

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